

Amendments to the Claims:

Please amend claim 1 to read as follows. All claims pending, including those unchanged by the present amendment, are reproduced below for the convenience of the Examiner. This listing of claims will replace all prior versions, and listings, of claims in the application.

Please add new claim 32.

1. (Currently amended) A sensor array for detecting an analyte in a fluid, said sensor array comprising: first and second sensors wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, each of which sensors provides a different detected response in the presence of said analyte; wherein said aligned conductive material comprises aligned distinct particles; wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile.

2. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said first and said second sensors are first and second chemically sensitive resistors, each of the chemically sensitive resistors comprising: a plurality of alternating regions comprising a nonconductive region and an aligned conductive region that is compositionally different than the nonconductive region, wherein each resistor provides an electrical path through said nonconductive region and the aligned conductive region; a first electrical resistance when contacted with a first fluid comprising an analyte at a first concentration; and a second electrical resistance when contacted with a second fluid comprising said analyte at a second different concentration.

3. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said conductive region is aligned by exposure to a member selected from the group consisting of an electric field, a thermal field, a magnetic field, an

electromagnetic field, a photoelectric field, a light field, a mechanical field, and combinations thereof.

4. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is electrically aligned.
5. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is magnetically aligned.
6. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is photolytically aligned.
7. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said aligned conductive material is a member selected from the group consisting of metal, magnetic alloys, ceramics, oxides, intermetallic compounds, carbon black, nanoparticles and composite materials.
8. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises carbon black.
9. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises a nanoparticle.
10. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises a metal.
11. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 10, wherein said metal is a member selected from the group consisting of nickel, cobalt, iron, a ferrite and their magnetic alloys.
12. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 10, wherein said metal is a coating of a substrate, said substrate is a member selected from group consisting of glass, silicon, quartz, ceramic or combination thereof.

13. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 10, wherein said metal is a member selected from the group consisting of a precious metal coating and precious metal alloys.

14. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 13, wherein said precious metal coating is a member selected from the group consisting of silver, gold and platinum.

15. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive region is an oxide.

16. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 15, wherein said conductive region is a member selected from the group consisting of In_2O_3 , SnO_2 , $\text{Na}_x\text{Pt}_3\text{O}_4$, TiO_2 and BaTiO_3 .

17. (Original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said aligned region is a material selected from the group consisting of copper phthalocyanine and phenothiazine.

18.-28. (Previously canceled)

29. (Previously amended) A sensor array for detecting an analyte in a fluid, said sensor array comprising: first and second sensors wherein said first sensor comprises a sensing region of an aligned conductive magnetic material and a nonconductive insulating region, each of which sensors provides a different detected response in the presence of said analyte; wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile.

30. (Previously added) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein said aligned conductive magnetic material comprises iron.

*SUB
D
CMAID: Q*

31. (Previously added) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein said nonconductive insulating region is a polymer.

2

32. (New) A sensor array for detecting an analyte in a fluid, said sensor array comprising: first and second sensors wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, wherein said nonconductive insulating region is a polymer, each of which sensors provides a different detected response in the presence of said analyte; wherein said aligned conductive material comprises aligned distinct particles; and wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile.
